

**Amendments to the Claims:**

Please amend claim 1 and add new claims 40-52 as follows, and cancel claims 2-39 without prejudice to Applicants.<sup>2</sup>

Claim 1 (Currently amended): An electron beam physical vapor deposition coating apparatus comprising:

a coating chamber containing a coating material, the coating chamber being operable at an elevated temperature and a subatmospheric pressure;

a coating region within the coating chamber;

an electron beam gun for projecting an electron beam into the coating region chamber and onto the coating material, the electron beam gun being operable to melt the coating material and to evaporate molten coating material;

a first aperture in a wall of the coating chamber through which the electron beam must pass to enter the coating region;

a second chamber within the coating chamber and enclosing the first aperture so as to separate the first aperture from the coating region, such that the electron beam must pass through the first aperture and the second chamber before entering the coating region; and

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<sup>2</sup> Claim amendments presented herein are in accordance with the "Revised Amendment Format" published in the Official Gazette on February 25, 2003. Strikethroughs indicate deletions and underlining indicates insertions.

means for maintaining the second chamber at a pressure lower than the coating region

means for supporting an article in the coating chamber so that vapors of the coating material deposit on the article;

a condensate hood within the coating chamber and at least partially surrounding the support means, the condensate hood having a first reflective member located within the coating chamber such that an article supported on the support means is between the first reflective member and the molten coating material, the first reflective member being movable between first and second positions relative to the molten coating material, the first position being closer to the support means than the second position such that an article supported by the support means is subject to more reflective heating from the molten coating material when the first reflective member is in the first position than when in the second position; and

means for moving the first reflective member relative to the condensate hood.

Claims 2-39 (Cancelled)

Claim 40 (New): An electron beam physical vapor deposition coating apparatus according to claim 1, wherein the second chamber has a wall portion

attached to the wall of the coating chamber.

Claim 41 (New): An electron beam physical vapor deposition coating apparatus according to claim 40, wherein the wall portion of the second chamber has a second aperture through which the electron beam exits the second chamber before entering the coating region.

Claim 42 (New): An electron beam physical vapor deposition coating apparatus according to claim 1, further comprising a hood within the coating chamber and defining the coating region within the coating chamber, and a second aperture in a wall of the hood through which the electron beam enters the coating region.

Claim 43 (New): An electron beam physical vapor deposition coating apparatus according to claim 42, wherein the second chamber has a wall portion unattached to the hood.

Claim 44 (New): An electron beam physical vapor deposition coating apparatus according to claim 43, wherein the wall portion of the second chamber has a third aperture through which the electron beam exits the second chamber before passing through the second aperture in the hood and entering the coating region.

Claim 45 (New): An electron beam physical vapor deposition coating apparatus according to claim 42, wherein the second chamber is formed by the wall of the coating chamber, side walls attached to the wall of the coating chamber, and a lower wall parallel to the wall of the hood.

Claim 46 (New): An electron beam physical vapor deposition coating apparatus according to claim 45, wherein the hood is unattached to the second chamber so as to be capable of movement within the coating chamber independent of the second chamber.

Claim 47 (New): An electron beam physical vapor deposition coating apparatus comprising:

a coating chamber;  
a hood defining a coating region within the coating chamber, the coating region containing a coating material, the coating region being operable at an elevated temperature and a subatmospheric pressure;  
an electron beam gun for projecting an electron beam into the coating region and onto the coating material, the electron beam gun being operable to melt the coating material and to evaporate molten coating material;  
means for supporting an article in the coating region so that vapors of the

coating material deposit on the article;

a first aperture in a wall of the coating chamber through which the electron beam must pass to enter the coating region;

a second aperture in a wall of the hood through which the electron beam enters the coating region;

a second chamber between the wall of the coating chamber and the wall of the hood, the second chamber enclosing the first aperture so as to separate the first aperture from the coating region; and

means for maintaining the second chamber at a pressure lower than the coating region.

Claim 48 (New): An electron beam physical vapor deposition coating apparatus according to claim 47, wherein the second chamber has a wall portion attached to the wall of the coating chamber.

Claim 49 (New): An electron beam physical vapor deposition coating apparatus according to claim 47, wherein the second chamber has a wall portion unattached to the hood.

Claim 50 (New): An electron beam physical vapor deposition coating

apparatus according to claim 49, wherein the wall portion of the second chamber has a third aperture through which the electron beam exits the second chamber before passing through the second aperture in the wall of the hood and entering the coating region.

Claim 51 (New): An electron beam physical vapor deposition coating apparatus according to claim 47, wherein the second chamber is formed by the wall of the coating chamber, side walls attached to the wall of the coating chamber, and a lower wall parallel to the wall of the hood, the hood being unattached to the second chamber so as to be capable of movement within the coating chamber independent of the second chamber.

Claim 52 (New): An electron beam physical vapor deposition coating apparatus according to claim 51, wherein the lower wall of the second chamber has a third aperture through which the electron beam exits the second chamber before passing through the second aperture in the wall of the hood and entering the coating region.